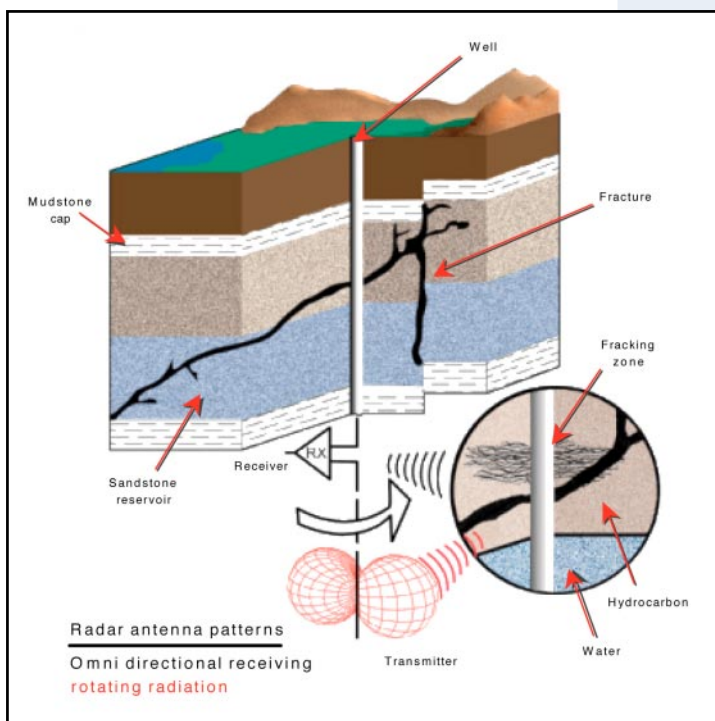


# Radar Mapping of Fractures in Hydrocarbon Reservoirs



- Radar antenna array and 400-kHz to 4-MHz band enables signals to propagate to distances beyond 10 meters from wellbore
- Radar data processed in high-resolution tomography algorithm
- Maps fractures and identifies fluid type
- High-resolution tomography software
- Imaging enables smart fracking and sealing to increase hydrocarbon recovery and oil/water ratio

## Commercialization Started



Horizon, Inc.

Raton, New Mexico



Institute for Measuring Systems Research  
(NIIS)

Nizhny Novgorod, Russia



Sandia National Laboratories  
Albuquerque, New Mexico